

## 5. Motor vehicle transport

This section describes hospitalisations due to unintentional motor vehicle transport-related injuries. WHO classifies the cause of motor vehicle transport-related hospitalisations according to a number of criteria (WHO, 1977; WHO, 1992). Injury hospitalisations due to motor vehicle transport occur in either *traffic* situations (i.e., occurring on a public highway or street, which includes both the roadway and other land between property lines (NCCH (2000)) or *non-traffic* situations (i.e., occurring anywhere other than a public highway or street). Motor vehicle transport-related hospitalisations are also classified according to the type of road user involved (e.g. pedestrian, motorcyclists). Motor vehicle transport road-user classes include *motor vehicle occupants* (drivers and passengers), *motorcyclists* (riders and passengers), *pedal cyclists*, and *pedestrians*. The person who is injured is usually referred to by both the type of traffic situation (i.e., traffic or non-traffic) of the incident and their road-user class (e.g. pedestrian).

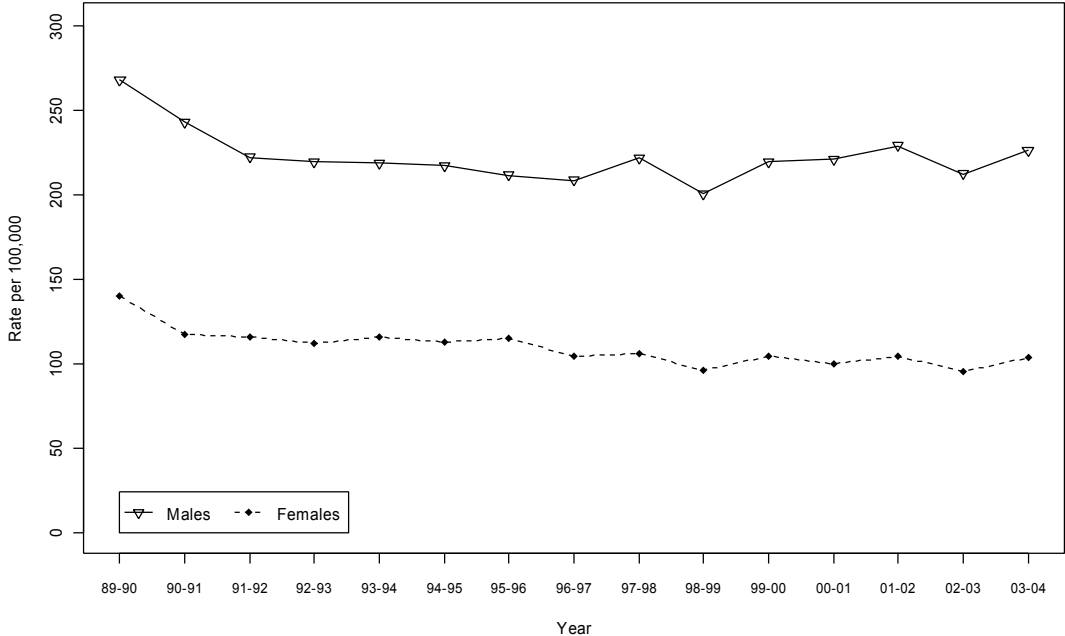
In NSW, motor vehicle transport-related incidents were the second leading cause of death in NSW during 1998–2002, with 2,765 deaths, giving a mortality rate of 8.5 per 100,000 population (Schmertmann et al, 2004). The lifetime cost of fatal and non-fatal motor vehicle transport-related incidents in NSW has been estimated at \$554 million - \$61.6 million in direct costs and \$493 million in mortality and morbidity costs (Potter-Forbes & Aisbett, 2003).

Motor vehicle transport-related injury hospitalisation data from 1989–1990 to 2003–2004 were used to describe the profile of motor vehicle-related hospitalisations of NSW residents. Data from 1999–2000 to 2003–2004 were used in the majority of analyses, except for the trend analysis, which used data from 1989–1990 to 2003–2004.

Motor vehicle transport was the second leading cause of injury hospitalisation for the period 1999–2000 to 2003–2004 and accounted for 10.6% of all injury hospitalisations (Table 3). During this period, there were 53,211 injury-related hospitalisations following a motor vehicle transport incident, at an age-adjusted hospitalisation rate of 162.1 per 100,000 population (Table 6). There were approximately 10,642 hospitalisations per year due to motor vehicle transport during 1999–2000 to 2003–2004.

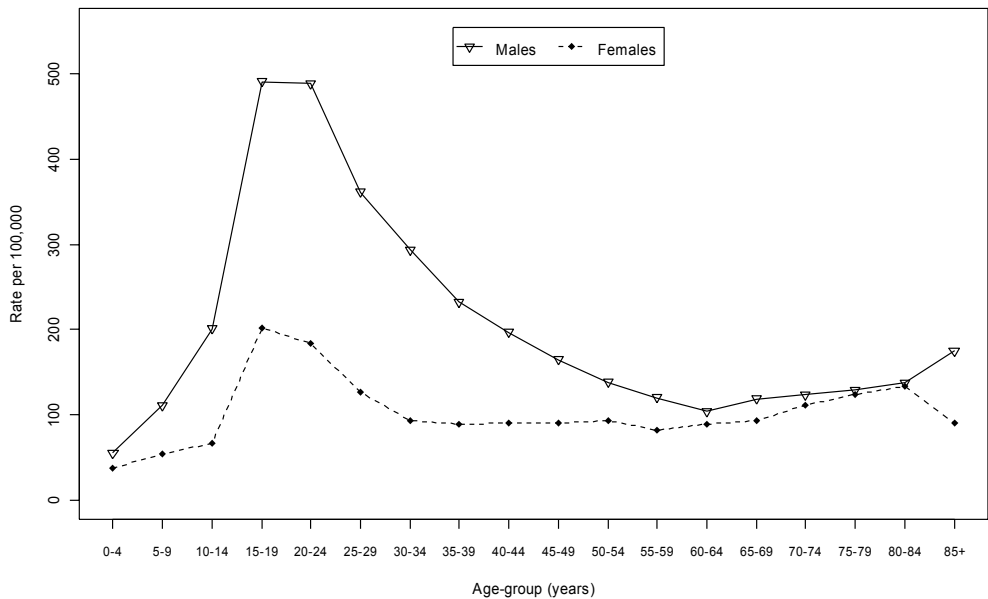
The age-adjusted hospitalisation rate for motor vehicle transport-related injury declined in both males and females during the period 1989–1990 to 2003–2004 (Figure 5). For males, the age-adjusted hospitalisation rate decreased significantly by 1.0% per year (95% confidence interval for the decrease: 0.4% to 1.5%). For females, the rate of hospitalisation decreased significantly by 1.9% per year during this period (95% confidence interval for the decrease: 1.4% to 2.5%).

**Figure 5. Hospitalisation rate for injury due to motor vehicle transport by sex, NSW 1989–1990 to 2003–2004**



Rates of hospitalisation following a motor vehicle transport-related injury were highest for males for all age-groups during 1999-00 to 2003-04 (Figure 6). Hospitalisation rates following a motor vehicle transport-related injury were highest in both sexes for those aged 15-19 years and 20–24 years.

**Figure 6. Age-specific hospitalisation rate for motor vehicle transport by sex, NSW, 1999–2000 to 2003–2004**



The most common combination of traffic situation and road-user that led to an injury-related hospitalisation was occupants of motor vehicles involved in traffic incidents. Motorcyclists in non-traffic incidents were the second most likely group to be hospitalised as a result of an injury. Overall, the hospitalisation rate of males was about 117% higher than that of females (Table 6).

**Table 6. Injury hospitalisations by motor vehicle transport road user class, NSW, number, rate and CI, 1999–2000 to 2003–2004**

Road user class	All Persons			Male			Female		
	N	Rate <sup>1</sup>	95%CI <sup>2</sup>	N	Rate <sup>1</sup>	95%CI <sup>2</sup>	N	Rate <sup>1</sup>	95%CI <sup>2</sup>
Occupant, traffic	25,564	77.7	(76.8,78.7)	13,846	84.8	(83.4,86.2)	11,718	70.6	(69.4,71.9)
Motorcycle, traffic	7,683	23.5	(23.0,24.0)	7,092	43.1	(42.1,44.1)	591	3.6	(3.4,3.9)
Motorcycle, non-traffic	7,175	22.0	(21.5,22.5)	6,662	40.4	(39.5,41.4)	513	3.2	(2.9,3.5)
Pedestrian, traffic	5,422	16.4	(16.0,16.9)	3,342	20.6	(19.9,21.3)	2,080	12.4	(11.8,12.9)
Occupant, non-traffic	4,448	13.5	(13.1,13.9)	3,140	19.3	(18.6,19.9)	1,308	7.8	(7.4,8.2)
Pedal cyclist, traffic	1,430	4.4	(4.2,4.6)	1,247	7.6	(7.2,8.0)	183	1.1	(1.0,1.3)
Pedestrian, non-traffic	895	2.7	(2.5,2.9)	560	3.4	(3.2,3.7)	335	2.0	(1.8,2.2)
Pedal cyclist, non-traffic	145	0.4	(0.4,0.5)	123	0.7	(0.6,0.9)	22	0.1	(0.1,0.2)
Other, traffic	330	1.0	(0.9,1.1)	196	1.2	(1.0,1.4)	135	0.8	(0.7,1.0)
Other, non-traffic	117	0.4	(0.3,0.4)	91	0.6	(0.4,0.7)	26	0.2	(0.1,0.2)
All <sup>3</sup>	53,211	162.1	(160.7,163.4)	36,299	221.7	(219.4,224.0)	16,912	101.8	(100.3,103.4)

1 Age-adjusted rate per 100,000 population.

2 95% confidence interval.

3 The number of NSW residents hospitalised interstate during 2003–2004 was imputed and as a result the sum of submechanisms may not equal the total.

In all age groups, the most common combination of traffic situation and road-user type that led to hospitalisation was *occupants of motor vehicles involved in traffic incidents*, except in the age group 10–14 years, in which the most common combination was *motorcycles involved in non-traffic incidents* (Table 7).

## SUMMARY

Motor vehicle transport-related injuries were the second leading cause of injury-related hospitalisation involving NSW residents during 1999–2000 and 2003–2004, accounting for 10.6% of all injury-related hospitalisations. The yearly hospitalisation rate for motor vehicle transport-related injuries was estimated to have decreased by 1.9% per year for females, and by 1.0% per year for males, during 1989–1990 to 2003–2004.

In 2003–2004, there were 11,066 hospitalisations of NSW residents following a motor vehicle transport-related injury, giving a hospitalisation rate of 165.5 per 100,000 population. Around one-quarter (28.1%) of those hospitalised following a motor vehicle transport-related injury were aged 15–24 years.

*Occupants in traffic incidents, motorcycles in traffic incidents, motorcycles in non-traffic incidents and pedestrians in traffic incidents* were the most common types of motor vehicle transport-related injuries that led to a hospitalisation. Males were more likely to be hospitalised following all types of motor vehicle transport-related injury than females, except in *other and unspecified* motor vehicle transport-related incidents. The overall hospitalisation rate for motor-vehicle transport-related injury was about 117% higher for males than for females.

**Table 7. Number of hospitalisations for motor vehicle transport incidents<sup>1</sup> by age group and cause, NSW, 1999–2000 to 2003–2004**

Rank	Age group										Total
	0-4	5-9	10-14	15-24	25-34	35-44	45-54	55-64	65+		
1	Occupant, traffic 365	Occupant, traffic 533	Motorcycle, non-traffic 1,137	Occupant, traffic 7,523	Occupant, traffic 4,811	Occupant, traffic 3,728	Occupant, traffic 2,968	Occupant, traffic 1,928	Occupant, traffic 3,097	Occupant, traffic 25,564	
2	Pedestrian, traffic 256	Motorcycle, non-traffic 422	Occupant, traffic 610	Motorcycle, non-traffic 2,622	Motorcycle, traffic 2,223	Motorcycle, traffic 1,443	Motorcycle, traffic 745	Pedestrian, traffic 415	Pedestrian, traffic 943	Motorcycle, traffic 7,683	
3	Pedestrian, non-traffic 183	Pedestrian, traffic 416	Pedestrian, traffic 435	Motorcycle, traffic 2,428	Motorcycle, non-traffic 1,510	Motorcycle, non-traffic 821	Occupant, non-traffic 533	Occupant, non-traffic 352	Occupant, non-traffic 608	Motorcycle, non-traffic 7,175	
4	Occupant, non-traffic 112	Occupant, non-traffic 167	Motorcycle, traffic 372	Occupant, non-traffic 1,088	Pedestrian, traffic 810	Occupant, non-traffic 634	Pedestrian, traffic 510	Motorcycle, traffic 214	Pedestrian, non-traffic 159	Pedestrian, traffic 5,422	
5	Motorcycle, non-traffic 58	Motorcycle, traffic 125	Occupant, non-traffic 224	Pedestrian, traffic 1,017	Occupant, non-traffic 731	Pedestrian, traffic 621	Motorcycle, non-traffic 361	Motorcycle, non-traffic 138	Motorcycle, traffic 118	Occupant, non-traffic 4,448	
6	Motorcycle, traffic 15	Pedal cyclist, traffic 116	Pedal cyclist, traffic 207	Pedal cyclist, traffic 337	Pedal cyclist, traffic 321	Pedal cyclist, traffic 209	Pedal cyclist, traffic 135	Pedal cyclist, traffic 55	Motorcycle, non-traffic 106	Pedal cyclist, traffic 1,430	
7	Pedal cyclist, non-traffic 8	Pedestrian, non-traffic 69	Pedestrian, non-traffic 41	Pedestrian, non-traffic 112	Pedestrian, non-traffic 98	Pedestrian, non-traffic 90	Pedestrian, non-traffic 94	Pedestrian, non-traffic 50	Pedal cyclist, non-traffic 42	Pedestrian, non-traffic 895	
8	Pedal cyclist, traffic 7	Pedal cyclist, non-traffic 29	Pedal cyclist, non-traffic 20	Pedal cyclist, non-traffic 34	Pedal cyclist, non-traffic 27	Pedal cyclist, non-traffic 17	Pedal cyclist, non-traffic #	Pedal cyclist, non-traffic #	Pedal cyclist, non-traffic #	Pedal cyclist, non-traffic 145	
	Other, traffic #	Other, traffic #	Other, traffic 15	Other, traffic 80	Other, traffic 52	Other, traffic 66	Other, traffic 33	Other, traffic 28	Other, traffic 46	Other, traffic 330	
	Other, non-traffic 6	Other, non-traffic 6	Other, non-traffic 14	Other, non-traffic 18	Other, non-traffic 16	Other, non-traffic 15	Other, non-traffic 23	Other, non-traffic 10	Other, non-traffic 8	Other, non-traffic 117	

<sup>1</sup># Cell sizes represent fewer than five hospitalisations or data have been removed to prevent identification of cell sizes less than five.